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ED 011 400 EA 000 306

STATE AID AND SCHOOL FISCAL POLICY.

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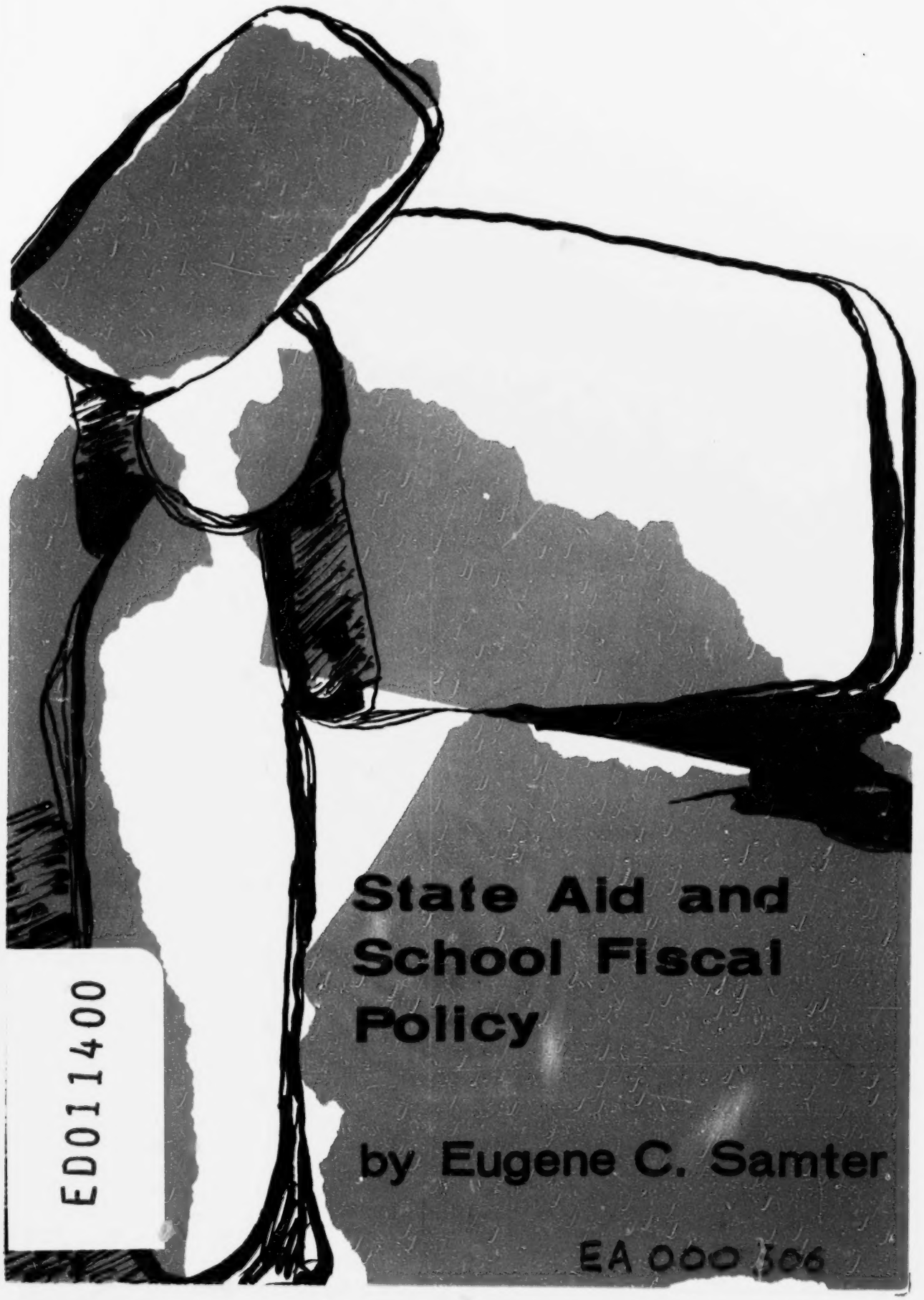
WESTERN NEW YORK SCHOOL STUDY COUNCIL, BUFFALO

PUB DATE 66

EDRS PRICE MF-$0.09 HC-$1.32 33P.

DESCRIPTORS- *EDUCATIONAL FINANCE, *STATE AID, *TAX SUPPORT, EQUAL EDUCATION, OPERATING EXPENSES, CAPITAL OUTLAY (FOR FIXED ASSETS), EDUCATIONAL LEGISLATION, *PUBLIC SCHOOL SYSTEMS, *FINANCIAL POLICY, FOUNDATION PROGRAMS, BUFFALO

THE EFFECTS OF A 1962 NEW YORK STATE AID TO EDUCATION ACT WERE INVESTIGATED IN RELATION TO AN OLD FOUNDATION PROGRAM. THIS STATE AID TO EDUCATION ACT WAS BASED ON THE CONCEPT OF SHARED COST. BOTH NEW AND OLD PROGRAMS WERE APPRAISED WITH RESPECT TO THE OBJECTIVES OF SCHOOL FISCAL POLICY--EQUITY OF SUPPORT (EQUAL TREATMENT OF EQUALS), EQUALIZATION OF SUPPORT, AND TAX RELIEF. THE FINDINGS INDICATED THAT (1) EQUITY OF OPERATING SUPPORT REMAINED ABOUT THE SAME WHILE EQUITY OF BUILDING SUPPORT IMPROVED, (2) THE PROCESS OF EQUALIZATION AND TAX-BROADENING RELIEF IMPROVED, AND (3) RELATIVE EMPHASIS UPON EQUALIZATION INCREASED IN OPERATING SUPPORT AND DECREASED IN BUILDING SUPPORT. THESE FINDINGS LED TO THE FOLLOWING RECOMMENDATIONS FOR CHANGES IN POLICY DEVELOPMENT AND IMPLEMENTATION--(1) DESCRIBE THE OPERATING SUPPORT CEILING IN LAW AS A CENTRAL TENDENCY OF OPERATING EXPENSE LEVELS, (2) DESCRIBE IN LAW A MEANS BY WHICH ALL DISTRICTS RAPIDLY AND WITHOUT UNDUE EFFORT CAN ACHIEVE THE BASIC SUPPORT LEVEL, (3) ELIMINATE SIZE CORRECTIONS, GROWTH AID, AND FLAT GRANT AID, AND (4) FURTHER EXAMINE THE COMPARATIVE EFFICACY OF AID TECHNIQUES IN ACCOMPLISHING TAX-BROADENING RELIEF. (HW)



State Aid and School Fiscal Policy

by Eugene C. Samter

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FOREWORD

In 1962, New York State wrote another chapter in the annals of public school finance when it abandoned the foundation program concept of distributing state monies to local school districts for a daringly new concept of "shared cost." The legislative committee recommending the new concept said that it did so to improve the equalization and equity effects of the old formula. Was any improvement really made in the distribution of state monies? Analyses to date show that the distribution is different, but they have failed to test whether or not the new distribution is any better. To do the latter is the purpose of Dr. Samter's study.

The findings and recommendations of the study should be of great value to the engineers of state aid formulae in all states, to politicians who bear the responsibility for the formulae they legislate, and to the schoolmen who must live with the results. The theoretician should find Dr. Samter's research designs of great interest, particularly his design for measuring the relative equity of the two formulae.

It is with great pleasure that the Committee on School Finance & Legislation of the Western New York Study Council makes this study available to the students and practitioners of public school finance.

Austin D. Swanson
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PREFACE

What New York State is doing for the support of its public school system is a perennial issue, annually underscored during the state legislative session. The question is ripe for reconsideration each time the State Legislature inscribes another page of school finance history.

Some clues for assessing recent state aid legislation may be taken from this study of school fiscal policy as it was expressed in the so-called Diefendorf state aid formula of 1962. The study, supported in part by the Committee on School Finance and Legislation of the Western New York School Study Council and by the State University of New York at Buffalo Computing Center, was performed under the advisement of George E. Holloway, Jr., Austin D. Swanson, and S. David Farr.

Logical analysis of the changes in the state aid provisions since the date of this study indicates that the findings are far from obsolete. Rather, it seems evident that the conclusions drawn at that time and the recommendations made concerning school fiscal policy are strengthened as a result of changes in the school support provisions since 1962.

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THE SCHOOL SUPPORT SETTING

Need for Evaluation

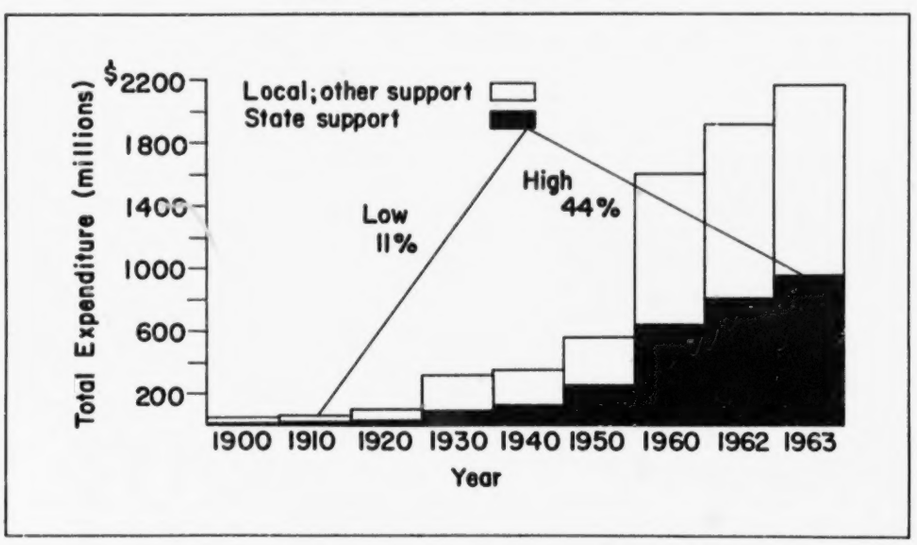
The considerable volume of research and opinion on the subject of school financial support is ample evidence of public concern in the matter. Yet other factors may be cited which lend urgency to an evaluation of the school support program in New York State.

The fiscal magnitude of the educational task is considerable, particularly when viewed over a span of years. Total expenditures for public elementary and secondary schools in New York rose from less than two million dollars in 1851 to over two billion dollars in 1963. Over the same period, state aid for this purpose went from one million to nearly one billion.

With the cost of education mounting continually, increasingly greater demands are being placed upon local resources in support of schools. Yet in this century alone, as illustrated in Figure 1, a point of parity between state and local support appears to be rapidly approaching.

FIGURE 1.

EXPENDITURES AND STATE AID FOR PUBLIC ELEMENTARY AND SECONDARY SCHOOLS, NEW YORK, 1900-1963



In recent years it also has become increasingly clear that greater emphasis is being placed upon the public function of education to serve state and national, as well as individual, interests. One consequence has been a strengthening of federal involvement in school financing.

The rapid development of these trends presents a danger in that makeshift devices may be used to implement public concerns. The study reported herein proceeded from the belief that public policy—expressed in this case as a device for educational support—should be developed carefully, should be based upon sound objectives, and should be subjected often to evaluative scrutiny.

School fiscal policy in New York has had added significance over the years as a result of the position of leadership this state occupies among the states. In 1925 New York provided a new frame of reference in which school finance might be veiwed: the guaranteed support of a level of educational opportunity of at least minimum acceptability. Virtually all states have since adopted this view. Again in 1962 New York was among the first to lead with a fresh approach involving what has been termed sharing of costs. The national character of the responsibility incumbent upon this leadership lends additional importance to the concern that the school fiscal policy expressed in this state be soundly based, carefully developed, and frequently appraised.

Background to the Problem

Necessarily preliminary to the statement of *the problem investigated* in this study is a brief sketch of the conceptual framework and background of the problem.

It is an accepted concept of social science that a highly organized society may arrange to accomplish its broad purposes through the use of formal institutions. In this country the public schools are one such cultural vehicle through which the values of American society are maintained and perpetuated and perhaps through which social change may be effected. It is the public school establishment in one segment of American society, New York State, which represented the setting for the present study.

The responsibility for education was not relegated to the federal government, but instead was accepted by the various states. Article XI of the New York State Constitution established as a statewide responsibility provision "for the maintenance and support of a system of free common schools". The declaration that schools would be universally available and gratuitous did not make it an accomplished fact, however, nor did provisions for establishment and financing of a school system achieve immediate fruition.

Nevertheless, with the background of values brought to and modified in this country and this state, and with the above constitutional pronouncement as a departure point, a course was adopted in New York setting the direction of development of a public school system. Like the society of which it is a part, New York State has been characterized by change. So, too, has been the public policy for dealing with the function of education.

The substance of public school policy and the changes therein have been evident not only in the oral and written pronouncements of people and organizations, but also in the combined statutes, rules and regulations,

adjudications and quasi-judicial decisions dealing with education. From this substance may be extracted certain key values or desired outcomes which have appeared as highly regarded elements of policy. When new laws or suggestions are made regarding education, they may be analyzed in terms of these elements or objectives.

Such a law was passed in 1962, dealing specifically with the provision of financial support for the public schools. As a result of the work of the Joint Legislative Committee on School Financing, state legislative and executive activity, and the recommendations of schoolmen, educational agencies, and laymen throughout New York State, the program of school support was revised. On March 29, 1962 the bill was introduced in the Assembly. Shortly thereafter both houses acted favorably upon the bill and, with the signature of Governor Nelson A. Rockefeller, it became law, Chapter 657 of the Laws of 1962.

Chapter 657 represented the first major revision of the school support program in New York State in over thirty-five years. It reduced the number of formulas for distributing state school aid from twenty-six to nine. In all types of major school systems (i.e. those having eight or more teachers) it provided for state sharing in the expenses of operating schools, transporting pupils, and erecting school buildings; previously some state aids for these purposes had been restricted to certain types of districts. State sharing under the new law rose 2.5 percentage points to 44.3 percent of total public school expenditures. New state funds amounting to one hundred fourteen million dollars were infused into the pattern of educational support in the first year of effect of the new law, 1962-63. All types of major school districts shared in the increases, as shown below in Table 1.

TABLE 1.

STATE AID* FOR MAJOR SCHOOL DISTRICTS 1961-62 AND 1962-63 (AMOUNTS IN MILLIONS)

			Increases, 1961-62 to 1962-63	
Type of District	1961-62	1962-63	Amount	Percent
New York City	$196.5	$252.0	$55.5	28.2%
Other Cities	107.7	126.5	18.8	17.5
Centrals	311.7	351.3	39.6	12.7
Union Free	161.6	192.4	30.8	19.1
Common	1.6	1.8	0.2	12.5
All Major Districts	$779.1	$924.0	$144.9**	18.6%

* Excluding aids apportioned under laws unchanged by Chapter 657, Laws of 1962

** Including approximately $31 million attributable to growth in pupil numbers rather than to formula changes under Chapter 657

Recent State Aid Legislation

Aside from certain conditions modifying total apportionments, the formulas used to compute aid for distribution to school districts in 1961-62, 1962-63, and even today display some overall similarities.

Under 1961 law, state apportionments to major school districts were determined by means of a basic formula for aiding school operating expenses and an accumulation of some twenty-five other formulas. The basic, or foundation, aid formula provided $339.40 per pupil through state-local sharing, with the local share computed as the product of full valuation of real property in the district and a rate of taxation of 7.08 mills. Thus, the local share varied directly with taxpaying ability, with one condition: no district received less than $152.22 per pupil as a flat grant of basic aid.

The many other formulas in effect in 1961-62 were used to compute aid for expenses related to operation, transportation and school construction, but these were primarily available only to certain types of districts. Among these were special aids ostensibly recognizing rapid growth, high tax rates, and financial hardships; for special classes for handicapped, delinquent, emotionally disturbed, and non-English speaking children; for adult education, night high school, and summer school; for sparsely enrolled districts, enlarged city districts, and New York City; for central school building, emergency building advances, and debt incurred prior to consolidation with other systems; for pupil transportation and for numerous other purposes and problems.

Similarly, 1962 law provided basic and special aids for the expenses of school operation, transportation of pupils and school construction. The special aids were reduced drastically in number, however, and apportionments for transportation and building expenses were made available to all major districts, irrespective of their legal organization as city, central, union free, or common districts.

The basic aid formula provided for state-local sharing in operating expenses up to $500 per pupil, with the local share based on the relationship between a district's property taxpaying ability and the statewide average in this respect. The flat grant, or minimum, of basic aid was set at $130 per pupil.

Special operating aid was provided to districts under 1962 law to reflect growth in numbers of pupils and to recognize higher operating costs assumed to result from sparsity or density of school population. The latter, known as size correction aids, were based on several, variable criteria, such as type of expenditures, size of pupil population, and size of total population.

In addition, 1962 law provided for state participation in the support of virtually all expenses of pupil transportation and school construction. Regardless of taxpaying ability the local share of transportation expenses was ten percent, whereas building aid, like basic operating aid, varied according to district ability.

Formula changes since 1962 have been restricted to increases in the

$500 operating support level and in the $180 operating flat grant, and to further extension of the size corrections.

Purpose of the Study

Descriptions of the 1961 and 1962 state aid formulas such as those given in the preceding section were provided in the 1963 report of the Joint Legislative Committee on School Financing. The Committee also gave a factual account of how and to which school districts state aid was apportioned in 1962-63.

While the study reported here included the dollar-and-cents facts of aid distribution, its more significant feature and primary purpose was the appraisal of the new law in respect to the objectives of school fiscal policy.

THE SCHOOL SUPPORT STUDY

Fiscal Policy Objectives

The development and implementation of a new formula for school support not only calls for an examination of its effects in terms of dollar allotments, but also provides a fruitful means for investigating fiscal policy and any apparent changes in it. In this respect, the minimal approach is to examine the extent to which the new law accomplished the objectives of those who proposed it.

Judging by the various releases of the Joint Legislative Committee on School Financing between 1961 and 1963, three policy objectives which the Committee particularly sought to achieve through revision of school aid laws were equity of support, equalization of support and tax relief (or tax broadening support. The present study compared the effects of the 1961 and 1962 school aid formulas in relation to these three public policy objectives.

Equity

The Concept. The concept of equity has developed more as a generalization implying fairness and justice, and considerably less as a scientific concept. While in recent years it has been used frequently and subjectively in the judgment of school support, equity has received its most extensive treatment and explicit application in tax theory. It is this source which produces the acceptable generalization that equity means the equal treatment of equals, but beyond this point agreement ceases.

For the purpose of analyzing the effects of the school support provisions of law, equity was defined as the element of school fiscal policy through which the state exercises its responsibility to assure that school districts with like characteristics achieve equal levels of support. Inequity would exist whenever districts with the same value of a given characteristic realize different support levels.

Application of the Concept

The essential steps[1] in this analysis were as follows:

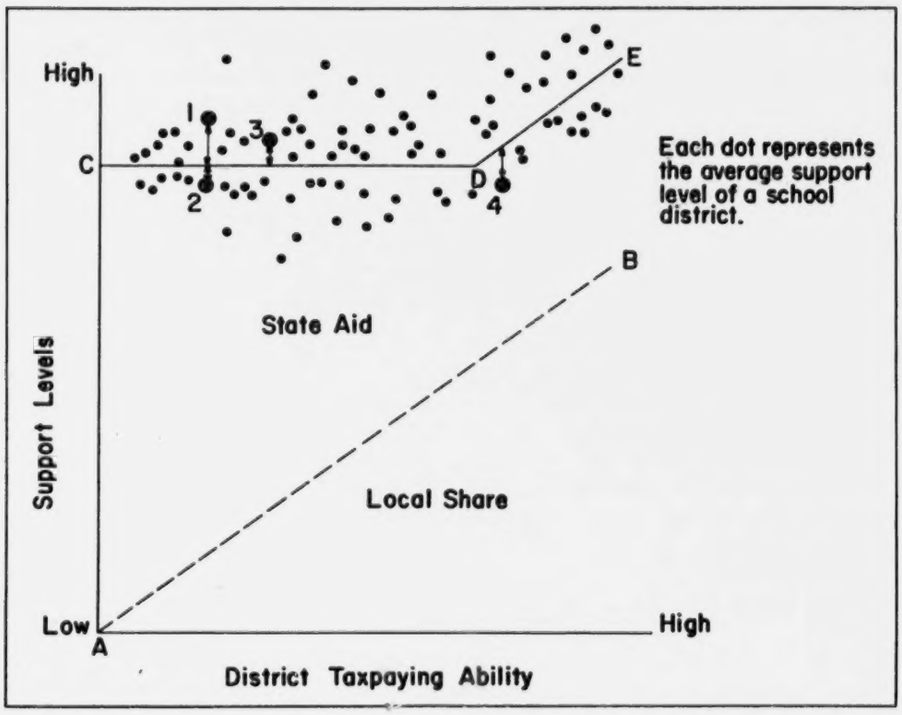
1. The computation of support levels—i.e., the sum of per pupil amounts of state aid received and local tax support computed at a uniform rate;
2. The selection of critical characteristics—i.e., property taxpaying ability, expenditure level, tax rate for expenditure level, size and growth rate of district in terms of pupils, type of district, and type of community;
3. The examination of variation in support levels in relation to the selected characteristics.

[1]A more detailed description of these procedures is provided in the appendix to this report.

The examination of variation in support levels is shown graphically in Figure 2 in relation to school district ability. Applied to increasing values of ability the uniform tax rate produces a local share to the level marked by line AB. The addition of state aid per pupil produces support levels distributed around line CD. Line CD itself hypothesizes the average or expected relationship between support levels and the specified characteristic, ability.

FIGURE 2.

CONSTRUCT OF THE EQUITY OBJECTIVE



In the case of districts 1, 2, 3, and 4 in Figure 2, inequity is illustrated as the distance between line CDE and the dots representing these districts.

Not at all surprising is the fact that, among the group of over 750 districts affected by the state aid laws of both 1961 and 1962, support levels did vary. Indeed, the prime issue was not the overall variance, but rather the variation at given values of the selected characteristics. In other words, the real issue was the extent to which this overall variance remained unexplained by those characteristics logically thought to be significantly related to support levels. Also critical in gaining insight into the achievement of the equity objective was the increase or decrease in this "unexplained" support level variance as a result of the new state aid provisions.

Findings

First, by way of summary, it can be said that inequity was found in the operating support and building support provisions of both 1961 and 1962, although inequity under 1962 law was less in respect to building support and about the same in respect to operating support.[2] Behind these generalizations are arrayed a number of specific findings, the more pertinent of which are outlined below.

The initial test of equity involved five of the selected characteristics which are continuous variables (ability, expenditure level, tax rate for expenditure level, size of district and growth rate). An early discovery was that the last three of these characteristics had virtually nothing to do with causing the variation in support levels. Expenditure level had little effect upon operating support levels in either 1961-62 or 1962-63, but considerably more effect upon building support levels in both years. Clearly the most influential factor in causing support levels to vary was the characteristic of ability.

While these facts may be inferred from Table 2, what is most obvious in these data is that there were factors other than the five continuous characteristics which caused variation in support levels under the laws of both years. This "unexplained" variation is crucial in the analysis of inequity and is evident in the percentages shown in the last column of Table 2. Apparently it remained approximately the same in respect to operating support levels available under both laws, perhaps increasing slightly in 1962-63. The 1962 provisions for building support, however, resulted in a marked reduction in inequity.

TABLE 2.

OVERALL VARIATION IN SUPPORT LEVELS AND VARIATION DUE TO ABILITY, EXPENDITURE LEVEL, AND OTHER FACTORS

Type of Support Level	Overall Standard Deviation of Support Levels	Standard Deviation Caused by:			Proportion of Overall Standard Deviation Caused by:		
		Ability	Expense Level	Other Factors	Ability	Expense Level	Other Factors
Operating:							
1961-62	$154	$100	$1	$53	64.9%	0.7%	34.4%
1962-63	173	101	1	71	58.4	0.6	41.0
Building:							
1961-62	$37	$18	$ 4	$15	48.7%	10.8%	40.5%
1962-63	41	21	12	8	51.2	29.3	19.5

A further test of equity involved the removal of the effects of ability and expenditure levels from support levels. The remaining, or residual,

[2]Transportation support levels were not analyzed in the study.

support levels represented a measure of inequity which could be examined in terms of types of districts (city, central, union free and common school districts) and types of communities in which these districts were located (city, suburban, and rural).

TABLE 3.

OVERALL VARIATION IN SUPPORT LEVELS AND RESIDUAL VARIATION DUE TO UNEXPLAINED FACTORS

Type of Support Level	Overall Standard Deviation of Support Levels	Standard Deviation of Residual Support Levels*		Effect of 1962 Law on the Residual Measure of Inequity, By Type of District, Community	
		Amount	Percent	Increased	Remained Same or Decreased
Operating:					
1961-62	$154	$48	31.2%	— —	— —
1962-63	173	56	32.4	Cities, Centrals, Rural	Union Free, Common, Suburban
Building:					
1961-62	$37	$17	45.9%	— —	— —
1962-63	41	17	41.5	— —	Cities, Centrals, Union Free, Suburban, Rural

*Support levels devoid of the effects of ability or expenditure levels

A comparison of the data in Tables 2 and 3 indicates that the latter presents evidence which is somewhat more conservative in respect to inequity among all major school districts. Even a cautious inference would be, however, that operating support equity did not improve under 1962 law, and, in fact, showed deterioration in the case of city, central, and rural districts. On the other hand, building support equity was restored somewhat under the new law.

Equalization and Tax Broadening Relief

Two objectives of American society which appear to constitute an antithesis are equality and diversity. Yet they actually lend each other complementary significance as explained succinctly by Burke:

> One may be called the dynamic or disequalizing factor; the other, the stabilizing or equalizing factor. If it were not for the dynamic element which creates educational variableness and disparities, there would be no great urge to stabilize or equalize educational opportunities . . . By gradually narrowing disparities of opportunity and preventing retrogression and decay, the equalizing element preserves and fosters the disequalizing element.
>
> Applied to a school finance system one of the elements has been

called the equalization principle; the other generally has been referred to variously as the progressive, the stimulative, the efficiency, or the adaptability principle.[3]

Equalization of Support Concept

The equalizing element described by Burke is amply recorded in school finance literature in the concern that education be of reasonable quality in all districts without requiring unreasonable and disparate effort in any. The classic operational definition of equalization of support was that given by Strayer and Haig in their 1923 report for the Educational Finance Inquiry Commission. They proposed:

> 1. A local school tax in support of the satisfactory minimum offering . . . at a rate which would provide the necessary funds for the purpose in the richest district.
>
> 2. This richest district then might raise all of its school money by means of the local tax, assuming a satisfactory tax, capable of being legally administered could be devised.
>
> 3. Every other district could be permitted to levy a local tax at the same rate . . ., but
>
> 4. Since the rate is uniform, this tax would be sufficient to meet the costs only in the richest districts and the deficiencies would be made up by state subventions.[4]

The basic elements of equalization of support at a given level of support, and local and state contributions to achieve that level. For present purposes, equalization of support was defined as the element of school fiscal policy through which the state exercises its responsibility to use public funds to guarantee that a specified support level may be achieved regardless of local school taxpaying ability.

Tax Broadening-Relief Concept

The Strayer-Haig plan for equalization provided for a local contribution to be achieved through a tax levy at a rate which would result in no state aid for the wealthiest districts. State responsibility may go beyond the attempt to achieve the equalization objective, however. The Heald Commission in 1956 declared that state aid might be used

> . . . to recognize the state's responsibility for education in all districts regardless of the requirements of . . . equalization, by guaranteeing at least a minimum participation by the state in the foundation program cost of each district . . .[5]

The effect of providing aid in addition to that required for equalization is to lighten the demands on the local property tax. In turn, the local funds

[3]Arvid J. Burke, *Financing Public Schools in the United States* (New York: Harper and Brothers, 1957), p. 216.
[4]Educational Finance Inquiry Commission, *The Financing of Education in the State of New York*, prepared by George D. Strayer and Robert Murray Haig (New York: The Macmillan Company, 1923), pp. 174-175.
[5]Temporary Commission on Educational Finances, *Financing Public Education in New York State* (Albany: State of New York, 1956), p. 29.

so released may be used to enhance conditions for progress, experimentation, or adaptability.

In tracing the evolution of this element of school fiscal policy as an answer to economic needs, Mort noted that the increased demand for education, resulting from forces such as invention, industrialization, urbanization, and labor specialization, imposed upon a decentralized school system an ever expanding burden which had to be supported through the local property tax. At the same time, however, other local governments increased their dependency upon the property tax. When called upon to ease the situation, the central government has had several alternatives, including the following:

1. Transfer certain functions to the state (e.g., highways).
2. Place limits on property taxation.
3. Permit school districts and/or municipal governments to levy nonproperty taxes.
4. Use state nonproperty tax revenues to broaden or relieve the local property tax for schools and/or municipal governments.[6]

While all four methods have been adopted in New York State, the fourth illustrates the use of state tax revenues for the tax broadening-relief objective. In this study, tax broadening-relief was defined as the element of school fiscal policy through which the state exercises its responsibility to use public funds to reduce the burden upon local school tax resources.

Application of the Concepts

In examining the extent to which the 1961 and 1962 state aid provisions accomplished the objectives of equalization of support and tax broadening-relief, several aspects of these concepts were scrutinized.

One aspect of the equalization objective which was examined was the adequacy of support levels actually produced by law or, in other words, the adequacy of statutory support levels. While objective measures of adequacy have always proved elusive, it was possible to gain insight through an analysis of the relationship between the statutory support levels and levels of actual expenditure in both years.

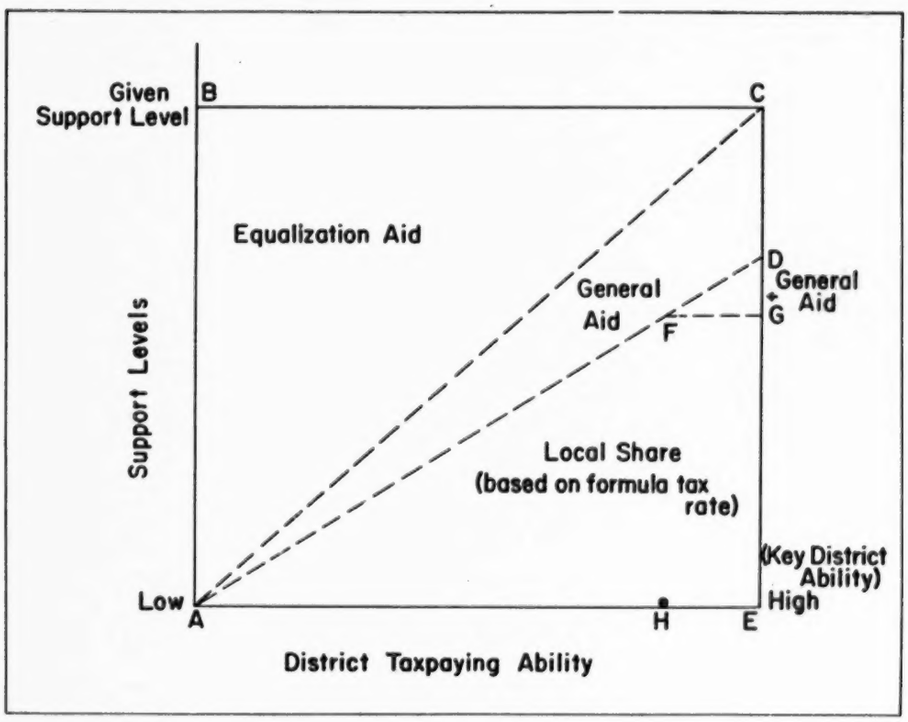
Aid for the equalization objective was ascertained in the classic manner of selecting the wealthiest, large district, determining the tax rate necessary to finance entirely a given support level in this key district, and then applying this tax rate in all other, less wealthy districts. The subventions required to reach the given support level were termed equalization aid. Any other aid not necessary for equalization was considered general aid (i.e., aid for tax broadening-relief).

The relationships among the given support level, equalization aid, and general aid are modeled in Figure 3, where it is assumed that key district (E) is the most able district in the state and that the given support level is the same for all districts.

[6]Paul R. Mort, *The Foundation Program in State Educational Policy* (Albany: New York State Education Department, 1957), p. 48.

FIGURE 3.

CONSTRUCT OF STATE AID FOR THE POLICY OBJECTIVES OF EQUALIZATION OF SUPPORT (EQUALIZATION AID) AND TAX BROADENING-RELIEF (GENERAL AID)



The rationale of Figure 3 is as follows:

1. The area marked by ACE is the local share based on the key district tax rate for equalization; thus

2. Area ABC is equalization aid, aid necessary for equalization; but

3. The state aid formulas by law have not required a tax rate as high as the key district tax rate; hence

4. Area ADE is the local share based on the lower formula tax rate; hence

5. Area ACD is general aid, aid not necessary for equalization; but

6. State aid formulas also have included a minimum grant of operating aid regardless of district ability, which provides additional general aid marked by area DFG.

The construct and procedures described above made it possible to examine two other aspects of equalization of support and tax broadening-relief: (1) the overall amount and proportion of state aid reflecting each objective; and (2) the purity of the distributional process in relation to district ability.

Findings

The findings of these tests indicated that the 1962 state aid provisions produced some gains and some slight shifts in policy emphasis with respect to the objectives of equalization of support and tax broadening-relief.

In terms of state-local sharing in operating expenditures on a state-wide basis, it was found that the support provided by law represented about 83 percent of operating expense in 1962-63 as compared with about 77 percent in 1961-62 (See Table 4). In light of the trend of rising expenditures coupled with the effective ceiling on statutory support, it was anticipated that the slight gain in adequacy under 1962 law represented the maximum improvement which the law would produce without further change in its elements.[7]

TABLE 4.

MEAN AVERAGE LEVELS OF OPERATING EXPENSE AND STATUTORY SUPPORT, 1961-62 AND 1962-63

	Statutory Support Level	Operating Expense Level	Percentage Statutory Support
1961-62	$ 420	$ 545	77.1%
1962-63	500	600	83.3
Increase 1962 to 1963	80	55	6.2

In contrast to the findings concerning operating support, the study disclosed no reason at all to question the adequacy of building support under 1962 law. As illustrated in Table 5, 1961 law produced only about 33 percent support of building expenditures, whereas statutory support rose to nearly 99 percent of building expenditures in 1962-63 or, in other words, virtually complete cost-sharing.

[7]In 1965, such a change did in fact occur, when the operating ceiling, operating flat grant, and certain other special operating aids were liberalized. It is estimated that these changes restored the measure of adequacy used herein to approximately the 83 percent level.

TABLE 5.

MEAN AVERAGE LEVELS OF BUILDING EXPENSE AND STATUTORY SUPPORT, 1961-62 AND 1962-63

	Statutory Support Level	Building Expense Level	Percentage Statutory Support
1961-62	$ 27	$ 82	32.9%
1962-63	82	83	98.8
Increase 1962 to 1963	55	1	65.9

In examining the relative emphasis upon equalization and tax broadening-relief within the operating support provisions of law, the basic aid formula provisions were distinguished from those which provided special operating aids. In addition, it was possible to estimate the potential policy emphasis under the 1962 law by re-computing operating aid for all districts under the supposition that they all took full advantage of the basic and special operating support provisions of law.

As a result, it became evident that the proportional emphasis upon equalization and, about 61 percent of operating aid in 1961-62, shifted to nearly 70 percent under the potential of 1962 law. Conversely, general aid for operation was reduced from 39 percent to a potential 30 percent. Close scrutiny of the data in Table 6 indicates that this overall shift was the result of a marked decrease in the relative importance of general aid in the special operating support provisions and a large, concomitant increase in emphasis upon equalization in the basic operating support provisions.

TABLE 6.

PROPORTIONS OF EQUALIZATION AID AND GENERAL AID FOR OPERATING EXPENSE, 1961-62 AND 1962-63

	Basic Operating Aid		Special Operating Aid		Total Operating Aid	
	Equalization	General	Equalization	General	Equalization	General
1961-62	53.8%	29.1%	6.9%	10.2%	60.7%	39.3%
1962-63 Actual	64.8	28.2	3.6	3.4	68.4	31.6
1962-63 Potential	63.5	26.7	6.2	3.6	69.7	30.3

When the analysis of policy emphasis was made in respect to building aid the findings again as in the equity analysis represented a contrast to those regarding operating aid. A heavy emphasis upon equalization in 1961-62 building aid, nearly 92 percent, was reduced to about 83 percent under 1962 law. General aid, only 8 percent of building aid in 1961-62, represented about 17 percent under the new law.

The final aspect of equalization and tax broadening-relief which was examined was the processes by which financial assistance for these objectives was distributed. This was a question of their relationships to ability. With respect to equalization aid which varies inversely with ability, purity in the distributional process would be reflected by a negative correlation coefficient of —1.000. General aid, on the other hand, varies directly with ability and a pure relationship here would be described by a coefficient of +1.000.

The processes by which these aids were distributed showed improvement, as the data in Table 7 indicate. The gain in equalization of operating support was evidenced by correlation coefficients of —.780 in 1961-62 and —.828 in 1962-63; in equalization of building support by a coefficient which increased from —.802 to —.861. The improvements in the process of general aid were described by coefficients which rose from .786 to .828 (operating support) and from .142 to .521 (building support).

TABLE 7.

DEGREES OF EQUALIZATION AND TAX BROADENING-RELIEF IN OPERATING AND BUILDING SUPPORT, 1961-62 AND 1962-63

	Coefficient of Correlation Representing Degree of Purity in	
	Equalization Process	General Aid Process
1961-62:		
Basic Operating	-.780	.847
Total Operating	-.780	.786
1962-63(Actual)		
Basic Operating	-.828	.852
Total Operating	-.828	.822
1962-63 (Potential)		
Basic Operating	-.828	.854
Total Operating	-.828	.828
1961-62 Building	-.802	.142
1962-63 Building	-.861	.521

Again, additional insight was provided by means of a separate examination of the effects of the basic operating support provisions and total operating support provisions. As illustrated in the last column of Table 7, the special operating aid formulas in both 1961 and 1962 law had a debilitating effect on the general aid process. No disturbance was noticeable in the relationship between equalization aid and ability primarily because, by the very nature of the process, equalization makes the first claim upon state assistance and, assuming the sufficiency of the overall aid available, satisfies its claim fully before tax expansion or tax relief commences.

Toward Improved Policy Implementation

Summary

The initial problem posed was the extent to which the 1962 state aid law achieved certain public policy objectives. Simply stated, the answers provided by the findings were: (1) equity of operating support remained about the same while equity of building support improved; (2) the processes of equalization and tax broadening-relief improved; and (3) relative emphasis upon equalization increased in operating support and decreased in building support. These essential conclusions and other findings of the study produced more extensive implications, however, and pointed towards certain suggested changes in policy development and implementation.

Conclusions and Implications

To contend that the study of equity was definitive rather than exploratory would be to ignore problems of study design and measurement, such as the pupil and ability measures. A current issue, for example, is the suitability of real property valuation versus other bases or combinations of bases as indicators of fiscal capacity. In the real property base itself there are numerous technical deficiencies and acknowledged injustices. Also questionable is the pupil measure, the issues of attendance versus enrollment versus membership and whether or not the present weighting of secondary school attendance is accurate.

Despite these problems, however, the findings of the equity analysis primarily were explained by certain aids under the new and old laws which were based on characteristics other than ability or expenditure levels. Fiscally the most important of these in 1961-62 were building aid and the central school pupil adjustments and, in 1962-63, the size corrections.

In eliminating legal form of district organization as a distinguishing criterion of state building assistance, the Joint Legislative Committee on School Financing succeeded in reducing the variation of such support levels which cannot be traced to ability or expenditures. Greater equity ensued as a result.

The equity restored to building support was not accompanied by like improvements in operating support, largely because several criteria other than ability or expenditure level determined 1962-63 size correction aid,

and even these were inconsistently applied. Inevitably, also, this variability militated against the equalization and general aid purposes.

Conceptually and mechanically, the size corrections were subject to criticism. As reprehensible as they were, however, they only reflected the real source of the inequity—the $500 per pupil ceiling on operating expenditures for state sharing. For it was indeed the imposition of this severely restrictive barrier that invited attempts to breach it with rationalized expedients. In a very real sense it may be said that inadequacy led to inequity. Lending added emphasis to this conclusion was the experience in greater equity of building support, where there is state sharing in virtually all school building costs.

From the standpoint of equalization what was equally significant about the building support levels of 1962-63 was their currency. With minor exceptions they represented neither more nor less than the current school building financing requirements as decided within each school district. Equalization of support was assured for even the districts of meanest ability by basing it, not upon past experience, but upon current needs and aspirations.

It is just such districts, those of low wealth, for which the support level described by statute represents the expenditure level that can be achieved. This fact, a product of experience with the foundation program concept, was further evidenced in this study. In order to avoid the inexorable development of substandard education, then, it is imperative that the support level which can be achieved by law be reflective at least of the average trend of school costs.

While the attempt to make the statutory support level, or ceiling, synonymous with the average expenditure level represents a reasonable policy tactic, it is indeed the logical inference of this investigation that the goal should be state-sharing in all school operating costs. The desired end is to maximize the opportunity for both equality and diversity, which are the underlying educational and social objectives of equalization of support and tax broadening-relief. To accomplish this fully the school support law would have to observe and reflect precisely the needs and aspirations of all localities through full cost sharing.

Recommendations

In the dynamics of policy there are both tactical and strategic considerations. The recommendations growing out of this study were of both types. The more immediate of these were the following recommendations:

1. As a first step towards the ultimate objective of full cost-sharing, to describe the operating support ceiling in law as a central tendency of operating expense levels;

2. To describe in law a means by which all districts rapidly and without undue effort can achieve the support level so described, a means

such as the use of currently budgeted expenditures in the computation of aid;

3. To eliminate the size corrections as a state aid device;

4. In conjunction with (2) above, to consider the elimination of growth aid;

5. To give careful consideration to the debilitating effects in policy of the flat grant of aid; and

6. To examine further the comparative efficacy of general aid and other techniques in the accomplishment of tax broadening-relief and the underlying rationale of this objective.

None of these was to be found in the enactments of the 1965 State Legislature. The statutory operating support level was increased to $600, still below the average expense per pupil. Moves to align this with the state-wide central tendency were quashed, as was an attempt to base aid on current budgets. The size corrections were amended, but there can be little question based on present standards that these amendments failed to restore equity. Fiscally, the size corrections gained even greater significance, and the deep-rooted tradition of the flat grant continued unassailable.

This report of little progress leads to the final recommendation of this study which is essentially a strategic concern. The fiscal and human considerations of the public school enterprise in this state are of the magnitude where the policy most likely to succeed must be reasoned, appropriate, and explicit: a plan which seeks to be broadly effective and encompassing rather than immediately efficient in the accomplishment of narrow purposes and unilateral desires. Such a policy venture was and is urged, under the leadership of the New York State Education Department or other body clearly representative of state-wide educational interests and employing the not inconsiderable human resources of this state. The attempt itself would make it possible to concentrate efforts on the refinement and achievement of basic objectives rather than to dissipate resources in the development and attainment of minor but, in many ways, expensive expedients.

APPENDIX

Tests of Equity of Support Definitions

In developing a design for analysis of the satisfaction of the equity objective, certain operational definitions were necessary, as follows:

Level—a unit expression meaning "per pupil"; thus, aid level and expense level meant aid per pupil and expense per pupil;

Support level—the effective amount of dollars per pupil available to each district and achieved through state-local sharing;

Ability—the full valuation of real property within a district which is taxable in support of education for each public school pupil; and

Local share—the amount generated by applying a uniform rate of taxation to the ability of each district in order to determine the district's contribution to a given support level.

The Development of Support Levels

The model for support was generalized and expressed as

Support level=local share per pupil+state aid per pupil

Local share was computed for both 1961-62 and 1962-63 by applying a uniform tax rate to the ability of each school district. For the local share of operating support, a rate of ten mills was used. The per pupil local share generated by this rate, added to operating expense aid level actually received in each year, produced an operating support level. In like manner, a uniform rate of two mills was used to determine the local share of support of building expenses. The resulting per pupil local share, added to building aid level actually received, produced a building support level. As a result of these computations, four support levels were developed for each of the 759 major districts involved in the study, as follows:

DIAGRAM A.

	Operating aid level plus 10 mills X ability	Building aid level plus 2 mills X ability
1961-62	x	x
1962-63	x	x

Two Tests of Equity

By definition, equity of support would exist when support levels are equal among districts with like characteristics. Thus, dispersion in support levels at a given value of a characteristic was adopted as a measure of (in)equity. The incidence of (in)equity was analyzed in relation to the following selected critical characteristics of schools:

Continuous characteristics:

1. Ability
2. Expenditure level (operating and building)
3. Tax rate for expenditure level
4. Size (total pupils)
5. Growth rate (increase in total pupils)

Discrete characteristics:

6. District organizational type (city, union free, central, common)
7. Community classification (city, suburban, rural)

Equity in Relation to Continuous Characteristics

A description of the relationship between support levels and each continuous characteristic was given by the Pearson product-moment coefficient of correlation between each characteristic and support levels. In recognition of linear relationships between some of the characteristics, these data were further refined by means of partial correlations.

For each district, the difference between actual support level and that predicted by the regression line associated with the correlation coefficient was viewed as an "error score", thus producing a distribution of "error scores". The variance of this distribution provided a single overall indication of that part of the dispersion of support levels which was *not* related to a given continuous characteristic and, hence, an indication of inequity. The "error score" variance is given by the following expression:

$$S_e^2 = S_y^2 \ (1 - r^2)$$

where S_e^2 is the variance of the distribution of "error scores";

S_y^2 is the variance of the distribution of support levels;

r^2 is the squared Pearson product-moment coefficient of correlation between support levels and a given continuous characteristic.

While S_e^2 provided indications of the existence of (in)equity and its absolute magnitude in each year, the question of improvement in this objective involved a relationship between the error score variance and the support level variance in each year. That is to say, a value of S_e^2/S_y^2 which was lower in 1962 than in 1961 represented an improvement in equity under the new formula provisions.

Equity in Relation to Discrete Characteristics

In order to examine the dispersion of support levels within discrete characteristics, it was first necessary to partial out from dispersion of support levels that part which was attributable to the continuous characteristics. For the distribution of support levels in districts subgrouped according to discrete characteristics, what was being sought was a variance devoid of the effects of the continuous characteristics. This was termed the variance of residual support levels (S_r^2).

For each subgroup, a variance-covariance matrix was developed for the values of support levels (Y) and the associated values of continuous characteristics (X_1, X_2 . . . X_n). This matrix was of the form (e.g., for subgroup A, city districts):

CHART 1.

	Y	X_1	X_2	• • •	X_n
Y	S_Y^2	Cov_{X_1Y}	Cov_{X_2Y}	• • •	Cov_{X_nY}
X_1	Cov_{X_1Y}	$S_{X_1}^2$	$Cov_{X_1X_2}$	• • •	$Cov_{X_1X_n}$
X_2	Cov_{X_2Y}	$Cov_{X_1X_2}$	$S_{X_2}^2$	• • •	$Cov_{X_2X_n}$
•	•	•	•		•
•	•	•	•		•
•	•	•	•		•
X_n	Cov_{X_nY}	$Cov_{X_1X_n}$	$Cov_{X_2X_n}$	• • •	$S_{X_n}^2$

The matrix developed for each subgroup was adjusted by superimposing a matrix of regression weights of the type

CHART 2.

	Y	X_1	$X_2 \cdots X_n$
Y	1	$-b_1$	$-b_2 \cdots -b_n$
X_1	$-b_1$	b_1^2	$b_1 b_2 \cdots b_1 b_n$
X_2	$-b_2$	$b_1 b_2$	$b_2^2 \cdots b_2 b_n$
$\vdots$	$\vdots$	$\vdots$	$\vdots$
X_n	$-b_n$	$b_1 b_n$	$b_2 b_n \cdots b_n^2$

The sum of the elements in the resulting, adjusted matrix was the variance of residual support levels. This expression (S_r^2) provided an indication of the existence of (in)equity within each type of district or community classification, as well as its magnitude. It was then possible to relate values of S_r^2 and S_y^2 for each group, providing the means for an examination of the change in equity from 1961 to 1962.

For the total group of 759 districts a pooled residual variance estimate was developed which eliminated any difference in group means for the two years. Overall comparisons between years were based on the relationship between these "average" residual variances and their respective support level variances.

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Buffalo, New York 14214

Partners Press, Inc. — 14 Alpett & Smith Printing